

By
a substantially non-compactable layer comprising sand and resilient material over said geotextile membrane;

a pile fabric over said substantially non-compactable layer, said pile fabric comprising a plurality of pile elements secured to a backing; and

an infill for said pile fabric, said infill consisting essentially of resilient particles.

REMARKS

The Office Action dated February 16, 1999 has been received and carefully studied.

The Examiner rejects claims 3 and 4 under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner states that there is no antecedent basis for the term "resilient particles".

The rejection is respectfully traversed.

Proper antecedent basis for the term "resilient particles" is recited as the last two words in claim 1 in defining the infill.

The Examiner rejects claims 1, 6, 8, 11, 13 and 17 under 35 U.S.C. §102(b) as being clearly anticipated by Tomarin, U.S. Patent No. 4,497,853, citing Figure 1 and column 3, lines 23-29 and column 5, lines 14-16. Tomarin discloses an athletic playing surface including a sub-surface layer 18, an open mesh cloth 21 over surface 18 and adhesively bound to a thick mat 20 formed of fibers and in-filled with coarse silica sand granules, a water barrier pad 22 over the mat 20, and a pile carpet 11 having a backing 15 and in-filled with sand 24.

By the foregoing amendment, claims 1 and 11 have been amended by reciting that the backing for the pile fabric includes a woven layer and a non-woven layer. Support for the amendment can be found at page 6, line 5 to page 7, line 3 of the instant specification.

Conventional carpet backings consist of a primary backing (which can be a single layer, but

usually consists of two woven layers) to which the yarn filaments or the like are tufted, and a secondary backing which is a liquid coating, such as a latex or a urethane, that is sprayed onto the primary backing and cured (usually by heat). Indeed, Tomarin discloses just such a carpet at column 2, lines 51-57 (the primary backing, which is a woven, polypropylene or nylon cloth sheet) and column 3, lines 11-21 (the secondary backing, which is a latex, urethane or vinyl material that is coated to the lower surface of the primary, woven backing sheet).

In contrast, the instant invention as now claimed in amended claims 1 and 11 specifies that the backing is comprised of a woven layer and a non-woven layer. The present inventors discovered that the inclusion in the backing of a non-woven layer resulted in exceptional dimensional stability of the carpet, preventing wrinkling. This is critical, as the instant backing allows for the elimination of sand in the infill of the carpet. Sand was conventionally thought to be necessary to provide the appropriate weight to the carpet. In addition, the porous nature of the non-woven material allows much higher weights of the liquid secondary backing to be absorbed upon spraying and curing, further adding to the dimensional stability of the carpet and to the strength of the tufting of the yarn in the fabric ("tuft bind"). The synthetic turf as now claimed in claims 1 and 11, wherein the backing comprises a woven layer and a non-woven layer, is nowhere disclosed or suggested by Tomarin. Accordingly, it is believed that the amendment overcomes the rejection.

The Examiner rejects claims 3-5, 9, 10 and 12 under 35 U.S.C. §103(a) as being unpatentable over Tomarin. The Examiner admits that Tomarin does not disclose the claimed resilient material or the interconnected perforated pipe. However, the Examiner concludes that it would have been obvious to use any well known resilient material depending upon the desired properties. The Examiner also concludes that the use of interconnected perforated pipe is well known and of not patentable merit.

Claims 3-5, 9, 10 and 12 are believed to be allowable by virtue of their dependence on amended claims 1 and 11, for the reasons discussed above.

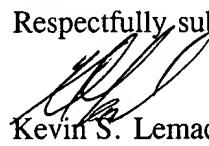
The Examiner also rejects claims 1, 3-6, 8-13, 17 and 18 under 35 U.S.C. §103(a) as being unpatentable over Alderson et al. in view of Tomarin. The Examiner states that Alderson et al. disclose the invention substantially as claimed, and cites Tomarin for its disclosure of the use of resilient particles as the carpet filling.

Alderson et al., like Tomarin, do not disclose or suggest a pile backing that includes both a woven layer and a non-woven layer as now recited in claims 1 and 11. Alderson et al. also disclose a conventional backing system, wherein a single backing layer is coated with a polymeric coating material. Accordingly, it is believed that the claims as amended are allowable over the combination of Alderson et al. and Tomarin. In addition, Applicants wish to point out that Alderson et al. do not disclose any infill for the carpet material, thereby calling into question the motivation of the skilled artisan to use modify Alderson et al. by using the infill of Tomarin.

The allowability of claims 2, 7, 14-16, 19 and 20 is noted with appreciation. Claim 14 has been rewritten in independent form as new claim 21. Claim 15 has been rewritten in independent form as new claim 23.

Reconsideration and allowance are respectfully requested in view of the foregoing amendment and remarks.

Respectfully submitted,



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